

REMARKS

Entry of the amendments to the specification before examination of the application is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #381AS/50352).

Respectfully submitted,

  
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend the second full paragraph at page 1 as follows:

Induced electromotive force of a rotational electric machine, especially of [a permanent-magnet magnetic field type] a permanent-magnet type rotational electric machine mounted on a vehicle such as a hybrid car or an electric car, is determined on the basis of a constant magnetic flux density generated by permanent magnets disposed in a rotor and a rotational angular velocity of the rotational electric machine. That is, when the rotational angular velocity of the rotational electric machine increases, the induced electromotive force of the rotational electric machine increases in proportion to the rotational angular velocity. Hence, the [permanent-magnet magnetic field type] permanent-magnet type rotational electric machine was able to obtain high torque power but was hardly operated in a high rotation region because the variable rotational velocity range of the machine was narrow. In the past, therefore, the high rotation region was widened by field weakening control.

Please amend the first full paragraph at page 3, as follows:

Another typical object of the present invention is to provide a rotational electric machine in which high torque characteristic can be obtained in a low rotation region

whereas [high output power] high power generation characteristic can be obtained in a high rotation region and in which mechanical reliability can be improved, and a vehicle loaded with the rotational electric machine.

Please amend the paragraph bridging pages 3 and 4 as follows:

The present invention is basically characterized in that high torque characteristic and [high output power] high power generation characteristic are obtained in a low rotation region and in a high rotation region respectively by mechanical control, that is, by controlling effective magnetic flux through dividing a rotor into two rotor portions. Specifically, a rotor having different-polarity field magnets arranged alternately in a rotational direction is divided into two axially separate portions. The axial position of one of the two rotor portions is changed relative to that of the other in accordance with a direction of torque of the rotor or the phase of synthesized magnetic poles of the field magnets is changed relative to that of magnetic poles of the other rotor portion in accordance with a direction of torque of the rotor. As a result, in the present invention, field weakening control can be performed even in the case where the stator windings are not supplied with any current. Moreover, according to the present invention, one of the two separate

rotor portions is supported from axially opposite sides by a support mechanism to thereby relax the axially moving force of the one rotor portion.